

Bioengineering

THE GRAINGER COLLEGE OF ENGINEERING
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN



Graduate Research Programs

- Ph.D. in Bioengineering
- Master of Science in Bioengineering

Bioengineering offers some of the most innovative graduate programs at the top ranked Grainger College of Engineering at the University of Illinois Urbana-Champaign. With access to state-of-the-arts facilities and instruments, students receive comprehensive research training that integrate the sciences of biology and medicine with the practices and principles of engineering. They also have the opportunity to work with a range of world-class Graduate Program Faculty members who represent numerous disciplines across campus.

Technical Focus Areas

- Bioimaging at Multi-Scale
- Bio-Micro and Nanotechnology
- Synthetic Bioengineering
- Molecular, Cellular and Tissue Engineering
- Computational and Systems Biology

Grainger Engineering Ph.D. students in their first five years of enrollment are guaranteed a funded appointment for fall and spring that includes a full tuition waiver, a partial fee waiver and a stipend. Students are also eligible for summer support. Students must remain in Good Academic Standing and successfully perform the duties of their assistantships.



What Our Graduates are Saying

“When I was a student, my interdisciplinary research project would not have been possible without collaborations with diverse departments across campus. Now, as a faculty at UIUC, I am excited to draw on those collaborations again for my teaching, research, and other endeavors.” **Caroline Cvetkovic, B.S. '11, M.S. '13, Ph.D. '17**

“As an international student trying to make it into academia in the U.S., I learned first-hand how important it is to have role models who have had a similar career trajectory as me. My advisor supported me every step of the way.” **Indrajit Srivastava, M.S. '17, Ph.D. '20**

“I did my undergraduate degree in mechanical engineering. After that, I spent three years working in the pharmaceutical and medical device industry before graduate school. I wanted to focus more on medicine and life sciences, but keep a foot in the mechanics world. I chose UIUC because I knew it has a really great culture of interdisciplinary collaboration. The Urbana-Champaign area offers a lot of amenities, but is a very peaceful place to live, study and do research.” **Ian Berg, Ph.D. '21**

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Degree Requirements

Students entering the Ph.D. program with a B.S. degree are required to have 96 credit hours of graduate-level coursework and research. Those with a prior M.S. degree are required to have 64 hours of coursework and research. Additionally, all students must successfully pass the qualifying, preliminary and final exams and complete a Ph.D. dissertation to earn a Ph.D. degree. Students may also obtain an optional M.S. degree during their Ph.D. candidacy.

Students in the M.S. with thesis program are required to complete 32 hours of coursework. For additional information about the M.S. curriculum, visit our website at bioengineering.illinois.edu.

Ph.D. Curriculum At a Glance

Fall Semester (12 credit hours total)

- BIOE 500 Bioengineering Seminar
- BIOE 501 Seminar Discussion
- BIOE 502 Bioengineering Professionalism
- BIOE 504 Analytical Methods in Bioengineering
- BIOE 505 Computational Bioengineering

Spring Semester (12 credit hours total)

- BIOE 500 Bioengineering Seminar
- BIOE 599 Bioengineering Thesis Research
- Core electives (8 credit hours, choose two from this list)
 - BIOE 507 Advanced Bioinstrumentation
 - BIOE 598 Special Topics (multiple sections)

Electives

In consultation with their research advisor and the bioengineering graduate program, students can choose from a wide range of pre-approved elective courses to help build technical skills aligned with their research. In addition to bioengineering, these elective courses can cover topics in electrical and computer engineering, physics, chemistry, biology and more.

Ph.D. Timeline

Year 1

- Enroll in core courses and begin doctoral research
- Pass the qualifying exam

Year 2

- Finish additional technical electives coursework

Year 3-4

- Pass preliminary exam

Year 5

- Complete and defend doctoral thesis research

Career Opportunities

Bioengineering graduate program alumni go on to become leaders in academia, industry and government. Here is a sampling of employers and starting positions:

Employers

- GE Healthcare
- Harvard Medical School
- Massachusetts Institute of Technology
- National Institutes of Health
- Sanofi

Job Titles

- Assistant Professor
- Data Scientist
- Medical Science Liason
- Postdoctoral Researcher
- R&D Project Manager/Director
- Senior Research Scientist

FOR MORE INFORMATION, VISIT:
BIOENGINEERING.ILLINOIS.EDU